

# Duke Energy Modernization Project – Landrum Information Session

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# Outline

- Energy Usage Patterns and Capacity
- Duke's Projected Income and Revenue Sources
- Project Scope and 2015 Integrated Resource Plan (IRP) Comments
- WNC Usage Peaks and Capacity – The Real Numbers
- What Duke is Really Proposing
- Aesthetic, Economic and Environmental Impacts



Note:

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## PART I

The number of residential, general service and industrial customers within the Regulated Utilities service territory is expected to increase over time. However, growth in the near term has been hampered by current economic conditions. Average usage per residential customer is expected to remain flat or decline for the foreseeable future. While total industrial and general service sales increased in 2014 when compared to 2013, the growth rate was modest when compared to historical periods.

### Seasonality and the Impact of Weather

Regulated Utilities' costs and revenues are influenced by seasonal patterns. Peak sales of electricity occur during the summer and winter months, resulting in higher revenue and cash flows in these periods. By contrast, lower sales of electricity occur during the spring and fall, allowing for scheduled plant maintenance. Peak gas sales occur during the winter months. Residential and general service customers are most impacted by weather. Estimated weather impacts are based on actual current period weather compared to normal weather conditions. Normal weather conditions are defined as the long-term average of actual historical weather conditions.

The estimated impact of weather on earnings is based on the number of customers, temperature variances from a normal condition and customers'

in a competitive marketplace may be less than their current book value, as well as above-market purchased power commitments from qualifying facilities (QFs). The Public Utility Regulatory Policies Act of 1978 (PURPA) established a new class of generating facilities as QFs, typically small power production facilities that generate power within a utility company's service territory for which the utility companies are legally obligated to purchase the energy at an avoided cost rate. Thus far, all states that have passed restructuring legislation have provided for the opportunity to recover a substantial portion of stranded costs.

Regulated Utilities' largest stranded cost exposure is primarily related to Duke Energy Florida's purchased power commitments with QFs, under which it has future minimum expected capacity payments through 2025 of \$2.2 billion. Duke Energy Florida was obligated to enter into these contracts under provisions of PURPA. Duke Energy Florida continues to seek ways to address the impact of escalating payments under these contracts. However, the FPSC allows full recovery of the retail portion of the cost of power purchased from QFs. For additional information related to these purchased power commitments, see Note 5 to the Consolidated Financial Statements, "Commitments and Contingencies."

In Ohio, Regulated Utilities conducts competitive auctions for electricity supply. The cost of energy purchased through these auctions is recovered

## Flat or declining energy usage in WNC in the last decade

### ENERGY USE IN WNC

Annual megawatt usage in the region has more than doubled since 1970.



Source: Asheville Citizen-Times online edition July 25, 2015



## National Energy Reliability Council (NERC) Overcapacity Stats

### Key elements of the NERC Documents:

- For the summer of 2015, NERC forecasted unused generation capacity in the Carolinas of **24** percent (Page 37 of the NERC 2015 Reliability report) during the year's hour of highest power usage;
- Tennessee had **26** percent of such reserves,
- Georgia-Alabama had **37** percent,
- Florida had **29** percent.
- the industry standard is **15** percent.
- Duke Energy projects large overcapacity during peak periods for the next **15** years, with reserves ranging from **23 to 33** percent from 2020 to 2029, when adjusted for a reasonable demand growth rate of 0.5 percent (the Federal Energy Information Agency and others forecast long-term demand to be flat or declining).
- In months of lower usage, Duke's reserve generation capacity ranges up to **57 percent** – at the time of peak demand during those months.

Source: NERC 2015 Reliability Report

Note:

We continue to deliver attractive returns to our shareholders. In 2014, Duke Energy achieved a total shareholder return of 26.4 percent, slightly below the Philadelphia Utility Index (UTY) return of 28.9 percent. Our balance sheet and credit quality remain strong, which keeps financing costs low and helps maintain competitive energy prices for customers.

Since 2009, we have consistently met our long-term annual adjusted diluted earnings-per-share growth objective of 4 to 6 percent. From 2009 through 2014, our actual average annual growth rate was approximately 4.5 percent.

We have extended our 4 to 6 percent growth objective through 2017, based on 2013 earnings.

\* For the periods ended December 31, 2014

This objective is supported by growth investment projects of \$14 billion to \$16 billion from 2015 to 2017, as well as organic retail and wholesale load growth. Later in this letter, I will report on the approximately \$8 billion of growth projects and investments we advanced in 2014.

As we move forward, we will continue to closely monitor variability in retail load growth trends, in particular the residential class, as well as some of the variables at Duke Energy International, such as hydrology in Brazil, foreign exchange rates and crude oil prices.

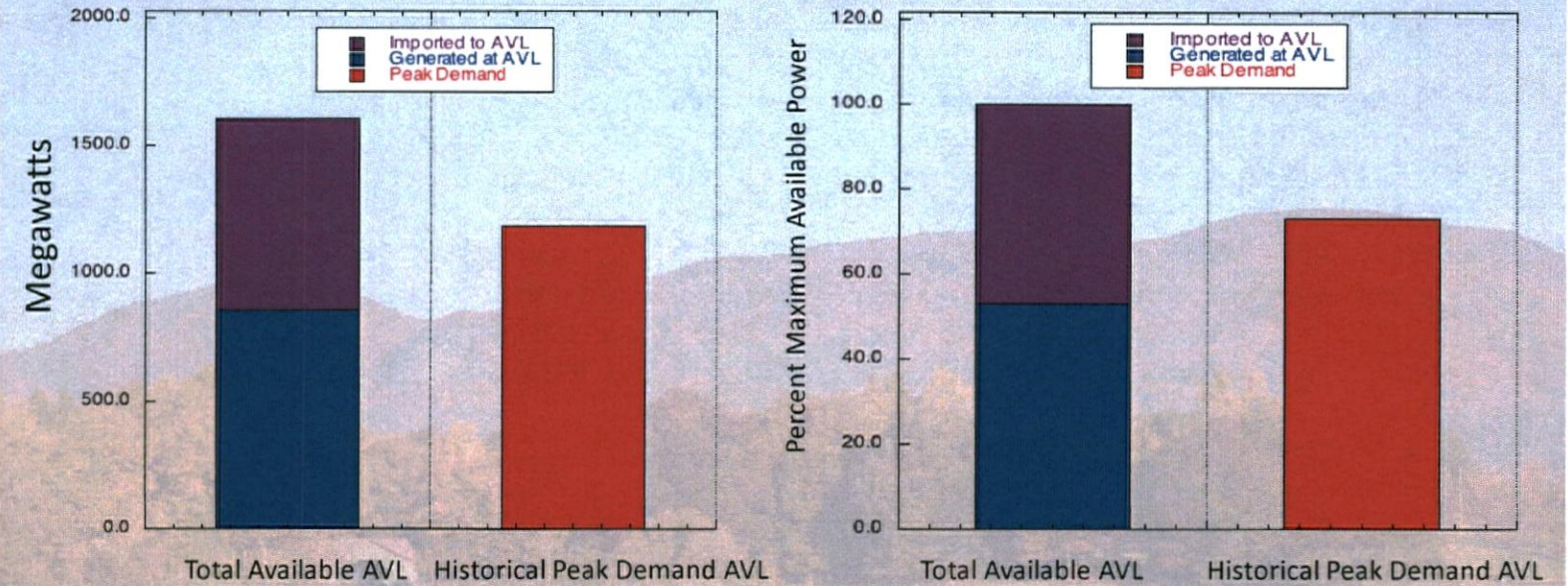


## 2015 Duke Energy IRP Comments

- Duke has specified a 2 x 1 Combined Cycle plant for Skyland. This is not a good design for a regional solution. A 3 x 1 or 4 x 1 would offer more reliability, versatility and the ability to adjust load to demand.
- The size of the plant Duke wants to build will essentially provide enough electricity to power **an additional 165,000 homes**. When is that growth supposed to occur?
- For the cost of an additional set of turbines to create redundancy, Duke could scrap the transmission line and substation and save money.
- Duke will experience a great deal of profit if this project is approved because of the Return On Equity (ROE) and is a large part of why they wish to spend so much money.
- At \$1.1 billion in cost, this plan is far in excess of what the WNC area needs for future growth.
- A senior exec at Detroit Edison for a number of years prior to retirement and has provided formulas to calculate the profit of the project after the first year of completion and after 30 years (the average calculated lifespan and depreciation period). If the rate case is approved, Duke will enjoy revenues of:
  - First year revenue will be approximately **\$87 million**
  - 30 year revenue will be **\$1.24 billion**.
- Building the substation within ½ mile of I-26 is a bad idea. We live in an age of domestic terrorism. The location of the proposed substation is also 20 miles from I-85 and 40 miles from I-40. An attack could occur and the perpetrators could be on one of 6 Interstate routes out of the area within about 30 minutes.



# Asheville/WNC available and Peak Demand in MW and Percentages





## Notes and source references for previous slide

- a) Email received 8/17/2015 from Tom Williams of Duke Energy stated that DEP West Peak Demand in 2014 was 1183 MW.
- b) Snider explained that the lines are needed to help meet peak demand, which last winter reached roughly 1,200 megawatts, though the system currently has an import capability of 750 megawatts, with a generation capability in the region of about 865 megawatts. (Blue Ridge Now [Website of Hendersonville Times-News, accessed 9-27-15]) (Glenn Snider is Duke's director of resource planning and analytics for the Carolinas).
- c) Note that peak demand is 73% of total capacity



## **Duke Claims they need the new Combined Cycle power plant and transmission lines to supply power to Asheville**

### **The truth is:**

- Plants of this design act as baseline electricity sources to power the grid and are not capable of throttling back below more than about 50% of capacity.
- That the 650MW size is much greater than Asheville's area base load means Duke is re-purposing the Arden site from a regional power plant to a system wide base load provider of electricity.
- If the power plant, transmission lines and substation are approved, electricity will be exported from Arden and shipped to markets outside the WNC and upstate SC area on the East Coast
- The transmission line will be capable of exporting up to 800MW of power to the grid.

Source: Table 2-8 on page 2-8 of B&V February 2014 data on Transmission capital costs

- This project is not about powering Asheville for the next decade. It is about selling power to other markets and Duke's profitability at the expense of landowners on the transmission line route.
- Building a rightsized (~400MW), modular plant – not the 2X1 Combined Cycle design – capable of incremental growth is in scope for planned growth in the Asheville market.

## **Duke claims they need new transmission lines to import needed power**

### **The truth is:**

- Duke claims the existing "Brevard" line is limited to being able to import 400MW but reports in the FERC Form 1 2014 4Q report the existing "Brevard" 230KV line is capable of importing up to 600MW of power. Recent claims by Duke state the actual number is 750 MW.\*
- Duke has a 600 MW 230kv to 115kv substation at the plant. Duke still had almost 200 MW of import capacity on that cold day in January when there was peak demand. There is ample transmission there, as two 230KV lines go into the plant
- The new power plant will provide an additional 274 MW of power if the 650MW combined cycle plant is built. The additional capacity is 25% above the current capacity and 10% in excess of the 15% they claim is needed for the Asheville region over the next decade. Since the Combined Cycle plant will be unable to throttle back to less than 50% of capacity, power will have to go somewhere. This further proves Duke is not building improvements for the Asheville regional market.

\* Source BlueRidgeNow September 27, 2015 "Duke defends need for transmission lines"



## Aesthetic, Environmental and Economic Impacts - a Summary

- A 45 mile swath, between 150 and over 220 feet wide will run from the new substation site to Asheville. It will be brown, defoliated and dead.
- The substation will be the first thing people see when they come to Exit 5 on I-26 heading north to the "Gateway to the Blue Ridge and Smokies"
- At night, the 16 acre, 4 story tall steel labyrinth will glow from security lights, producing an otherworldly sight.
- The transmission lines and towers will produce ugly views for those adjacent to them. Few people will buy a home within view of a power line.
- Potential exists for defoliant runoff into the North Greenville Watershed, Lake Lanier (Tryon, NC's reservoir) and the South Pacolet River (a class A trout stream).
- Stream sedimentation will occur at least during construction and the stabilization period, which could last years.
- Threatened or endangered species will be placed at risk.
- Duke will generate significant revenue and "shareholder value" through their previously mentioned Return on Equity while businesses and residents in the affected areas will shoulder the cost through:
  - Reduced income due to a lack of visitors – tourism IS this area's economic driver.
  - Reduction in property values – a majority of residents are retirees who have placed everything into their home.
  - Increased electricity rates as a component of the rate case to pay for the project
  - South Carolina residents will see no benefit from this project, only loss.



